

1,048,672

# PATENT SPECIFICATION

DRAWINGS ATTACHED

1,048,672



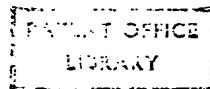
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## COMPLETE SPECIFICATION

### Dispensing Pack in Strip Form

5 I, MARCUS DIAMANT, of 1, Kungsgatan, Halmstad, Sweden; a Swedish subject, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 The present invention concerns a dispensing pack with the help of which material in solid, comminuted, or liquid form can be packed so as to be readily dispensable in predetermined quantities. For instance, the dispensing pack of the invention is well suited for the dispensation of a medicinal preparation in 15 prescribed doses.

20 An object of the invention is to provide a dispensing pack which holds material in the form of units, but gives access, at any one time, just to a single unit or to a pre-determined number of units.

25 According to the present invention, a dispensing pack in strip form for solid, powdered or liquid products comprises a row of wrappers or to a strip, the products being spaced one after the other along the pack and each being enclosed in a separate compartment formed between the rows of wrappers or between the row of wrappers and the strip.

30 When the strip is made up of two rows of wrappers, the wrappers of each row may be situated successively and adjacent to one another each wrapper of each of said two rows overlapping and being detachably secured to 35 two adjacent wrappers of the other of said rows.

40 The wrappers or the wrapper and the strip may be secured detachably to one another by an adhesive coating or by heat-sealing. When an adhesive coating is used the parts of the wrappers which form the packaging compartments may be free from this adhesive coating.

The wrappers may consist of rectangular

strips of essentially the same length and each wrapper on one side of the pack may extend over two packaging compartments.

45 Each wrapper may be furnished with a tab-like formation which may consist of an extension of one end of the wrapper freely projecting from the band. The tablike formations may project alternately from the two sides of the pack and may be located on the same end of the wrappers situated along the sides of the pack.

50 The wrappers can be made of cardboard, paper or similar material; or of plastics material, plastics material laminate or of aluminium foil.

55 The invention will now be described further, by way of example, with reference to the accompanying drawings, in which:—

60 Fig. 1 is a perspective view of a dispensing pack embodying the features of the invention;

65 Fig. 2 shows a portion of the pack of Fig. 1 in longitudinal section;

70 Fig. 3 is a sectional view similar to that of Fig. 2 of another embodiment of the invention; and

75 Fig. 4 is a sectional view of still another embodiment of the invention.

In Figs. 1 and 2, there is shown a dispensing pack which comprises a generally two-ply laminated structure in strip form designated 1. One of the two layers which form the laminated structure is constituted by a row of rectangular wrappers 4, 4', etc. The other layer is constituted by a row of wrappers 5, 5' etc.

80 In each of the layers, the wrappers follow each other consecutively in an end-to-end fashion, whereby the wrappers of one layer overlap two adjacent wrappers of the other layer. Take, for instance, wrapper 5 shown in Fig. 2 on top. It overlaps a portion of the wrapper 4 of the opposite layer, shown

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on top, as well as a portion of the wrapper 4' next following in downward direction. Thus, it bridges the place 6 where the two adjacent wrappers 4 and 4' meet. This place 6 is shown to be centrally located with respect to the referred to wrapper 5 on top of Fig. 2. The wrappers 4, 4', 4'' and 5, 5', 5'' are formed to define, when in laminated condition, capsulelike compartments 2 to hold tablets 3, 3', etc., the tablets being spaced one after the other along the pack and each being enclosed in a separate compartment. In the embodiment of Figs. 1 and 2, each wrapper is shown to form together with its two partly opposing wrappers two compartments 2. Except for tabs 9 and 9' which will be presently explained and portions of the wrappers which form the compartments 2, there are contiguous portions 7 and 8 of the wrappers of opposed rows, which are made to detachably adhere to each other. Each of the wrappers 4, 4', 4'' and 5, 5', and 5'' is provided with a tab 9 and 9', respectively, which sticks out of the general plane of the structure. The tabs are to be grasped between fingers so that the particular tab that is grasped and the associated wrapper can be pulled from the two opposing wrappers. It is the division of the laminated structure which permits unitwise separation of the wrappers. In the embodiment of Figs. 1 and 2, the tabs 9 and 9' are arranged in alternating positions. All the tabs 9 are pointing in one direction, while the tabs 9' point in the opposite direction. Where two consecutive wrappers of one and the same row meet, one of the two wrappers is provided with a tab.

The dispensing pack of Figs. 1 and 2 can easily be automatically manufactured in a long length. It will be appreciated that the dispensing pack consists of identical wrappers which are formed with depressions designated 10. The wrappers of the pack are made to detachably adhere to the other wrappers of the pack except, as has been indicated, for the tabs and capsule-like compartments of the wrappers. When the compartments of one of the wrappers have been filled, and this wrapper and a complementary wrapper are brought in a superposed condition, with opposing compartments in register, the two opposing wrappers are formed into a laminated structure, and spacedly arranged compartments formed. To expose the tablet 3, the upper end of the wrapper 4 (see Fig. 1), that is, the wrapper whose tab has been pulled before, is held with one hand, while tab 9' of wrapper 5 is pulled with the other hand. The pulling will cause a separation of a portion of the laminated structure and first expose the endmost tablet 3. When the separation continues, the next compartment will be opened for removal of the next tablet 3'. The next two tablets are freed by using the tab 9 of the wrapper 4' to pull same off. It is

the endmost tab that is always grasped for pulling purposes.

In the embodiment of Figs. 1 and 2, the compartments are aligned in a single lengthwise extending row. It will be apparent that compartments may be provided in any number of such rows, for instance, two rows. In the latter case, each compartment of one row will have a neighbouring compartment in a cross wise alignment. The wrappers will accordingly be broader.

The abutting edges of two consecutive wrappers on one side of the structure are centrally arranged with respect to the two nearest compartments. Such arrangement, as has heretofore been indicated, requires that the opposite wrapper bridges the line along which the two consecutive wrappers meet, or the gap between the consecutive wrappers, however small such gap may be, since it is this opposite wrapper which, upon opening of an endmost compartment remains a part of the next following laminations. The 'opposite' wrapper is held with one hand when the other hand does the pulling.

In the embodiment of Fig. 3, adjacent edges of two consecutive wrappers do not meet centrally with respect to the opposite wrapper. Instead, the meeting line 11 on one side of the laminated structure 1a and the tab 9a on the other side are spaced from each other so that the projecting portion 12 of the wrapper 13 can be held when the tab 9a is pulled. As further distinguished from the pack of Figs. 1 and 2, each wrapper of the pack of Fig. 3 forms a single compartment 2a only, when viewed in a longitudinal direction. It will, however, be understood, that more than a single compartment may be provided in the crosswise direction. The tabs on different sides point again in different directions.

In Fig. 4, a laminated structure 1b of a dispensing pack is shown, which consists of a single strip 14 on one side and a plurality of wrappers 15, 15' etc. on the other side. Each of the wrappers 15, 15' etc. together with the opposite portion of the strip 14 is considered as what has been referred to hereinbefore and will be referred to in the appended claims as laminations. Each of the wrappers 15, 15' etc. is provided with a tab designated 9b, 9b' etc., respectively. Thus, all the tabs appear on one side only of the structure. As in the case of Fig. 3, each lamination forms a single compartment only, again when considered in a longitudinal direction. Pulling off one of the wrappers 15, 15' etc. provides access to the contents of one compartment only, provided there is no more than a single compartment in the transverse direction. The compartments may again be arranged in a single row or in two or more rows.

It is believed that the structure and use of the dispensing pack, as well as the many

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advantages thereof, will be fully understood from the foregoing detailed description.

Many materials may be used for the dispensing pack, for instance, cardboard, paper, plastics, metal foils. When plastics materials are used in the form of laminates, rather than in a single-layer form, such laminates are to be considered, according to the terminology used in this specification and the following claims, as single-layer sheeting, so that a 'two-ply laminated structure' is meant also to cover a structure which consists of two plastics laminates. The manufacture of the laminated structure will partly depend on the material used. In the case of metal, or even plastics, a nondrying glue may be used for the lamination of contiguous surface portions. Such glue will not dry even during a long time of storage, always permitting easy separation of the wrappers forming the laminated structure. In the case of plastics, heat-sealing may advantageously be used. Heat-sealing along lines may be sufficient to form the laminated structure, doing away with laminating contiguous opposite surface portions. Being unattached, such contiguous portions may be used as tabs. When metal foils are used, folding and welding, or other steps may be taken to form my two-ply structure.

The use of plastics films serves a wide range of purposes, especially by combining films of different plastics and using the combinations in the form of laminates. Plastics films may also be combined with sheet material other than plastics films, for instance, aluminium foil, paper, cloth or the like. Such combinations may be used for packaging liquid and viscous products, to prevent moisture vapor transmission, as gas barriers, and for protection against oxydation.

At the same time, it should be appreciated that the terms, 'laminated structure' and 'lamination', both as used in the present specification and claims, are not intended to cover true laminations only but also formations in which layers are only sparingly attached to each other, for instance, across a portion of contiguous surfaces, along lines, or even merely at points.

The form and arrangement of the tabs may vary in many ways. For instance, a tablike formation may be folded upon the lamina of which it forms a part. This is done when the tab, due to the method of making the dispensing pack, is provided on one side with an adhesive coating. It is true, such fold-over tab is no longer a tab that protrudes from the general plane of the structure in the real meaning of the word, as shown in Figs. 1 to 4, but forms nevertheless a thickened portion that can be grasped by the fingers of a hand.

It has been found particularly useful to form the pack of the invention in strip form rather than in relatively broad sheet form.

When in strip form, the pack can easily be 65 rolled into a compact package.

WHAT I CLAIM IS:—

1. A dispensing pack in strip form for solid, powdered or liquid products comprising a row of wrappers detachably secured to another row of wrappers or to a strip, the products being spaced one after the other along the pack and each being enclosed in a separate compartment formed between the rows of wrappers or between the row of wrappers and the strip. 70
2. A dispensing pack as claimed in claim 1, in which the pack is made up of two rows of wrappers, the wrappers of each row being situated successively and adjacent to one another, each wrapper of each of said two rows overlapping and being detachably secured to two adjacent wrappers of the other of the said rows. 80
3. A dispensing pack as claimed in claim 1 or 2, in which the wrappers or the wrappers and the strip are detachably secured by an adhesive coating. 85
4. A dispensing pack as claimed in claim 3, in which the parts of the wrappers or the wrappers and the strip which form the packaging compartments are free from adhesive coating. 90
5. A dispensing pack as claimed in claim 1 or 2, in which the wrappers or the wrappers and the strip are heat-sealed to each other. 95
6. A dispensing pack as claimed in any of claims 1 to 5, in which each wrapper on one side of the pack extends over two packaging compartments. 100
7. A dispensing pack as claimed in any of claims 1 to 6, in which each wrapper is furnished with a tablike formation. 105
8. A dispensing pack as claimed in claim 7, in which each tablike formation consists of an extension of one end of the wrapper freely projecting from the pack. 110
9. A dispensing pack as claimed in claim 7 or 8, in which the tablike formations project alternately from the two sides of the pack and are located on the same end of the wrappers situated along the sides of the pack. 115
10. A dispensing pack as claimed in any preceding claim, in which the wrappers are made of cardboard or paper. 115
11. A dispensing pack as claimed in any of claims 1 to 9, in which the wrappers are made of plastics material. 120
12. A dispensing pack as claimed in claim 11, in which the wrappers are made of a plastics material laminate. 120
13. A dispensing pack as claimed in any of claims 1 to 9, in which the wrappers are made of aluminium foil. 125
14. A dispensing pack constructed and arranged substantially as herein described

with reference to and as illustrated in Figs. 1 and 2 of the accompanying drawings.

15. A dispensing pack constructed and arranged substantially as herein described 5 with reference to and as illustrated in Fig. 3 of the accompanying drawings.

16. A dispensing pack constructed and arranged substantially as herein described with reference to and as illustrated in Fig. 4 of the accompanying drawings. 10

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